
A Rain Garden How To Manual for City of Fort Wayne Homeowners





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This project was undertaken in connection with the settlement of an enforcement action by the United States and the State of Indiana concerning Combined Sewer Overflows.



1.0 INTRODUCTION

The “**Catching Rain Fort Wayne**” Green Infrastructure Initiative is kicking off to help members of the Fort Wayne community learn about the impact that we have on water quality, and how we can improve it by implementing natural processes.

Our landscape has changed significantly over the past hundred years. Urban and suburban development continues to alter the natural landscape that historically defined our region. Increasing amounts of rooftop, roadway and other paved surfaces, and the introduction of non-native plants have led to an increased amount of stormwater runoff. More runoff means more pollution can be carried into our waterways because we have reduced nature’s ability to infiltrate – or soak – rain water runoff into the ground.

Rain gardens can be an important way to reduce water pollution caused by flooding and increased stormwater runoff that carries surface pollutants into storm sewers and then into streams and other water bodies. Rain gardens can also help to reduce the amount of stormwater that



Source: Cuyahoga SWCD

enters storm sewers and the Fort Wayne combined sewer system, causing sewage to be discharged to our rivers during wet weather.

Rain gardens are man-made landscape features where stormwater runoff is allowed to collect and pond for a short period of time. Native perennial plants are typically used in a rain garden because they are hardy, they come back from year to year and they can actually help to filter some pollutants out of rainwater runoff while their roots help water soak into the ground naturally.

1.1 PURPOSE

This manual is intended to provide basic information about rain garden planning, planting and maintenance. It is meant to be used as a workbook for and supplement to the home owner how to workshops and *Fort Wayne's Development Criteria Standards Manual Supplement: General Guidance for Rain Garden Design*.

1.2 WHY RAIN GARDENS MATTER

As Fort Wayne grows, new development continues to replace green space with impervious surfaces such as rooftops, paved streets and parking lots. Impervious areas don't allow water to soak – or infiltrate – into the ground,

so they contribute to stormwater runoff. Even the construction activity on developing sites can compact the ground, limiting its capacity to absorb water.



Stormwater runoff coming from developed areas can be a significant source of pollution. The runoff from rain, and even melting snow, can carry contaminants into streams,

lakes and rivers. Water pollution can be traced to our own homes and yards. A modest home on a small lot may produce over 1,000 gallons of runoff from a one-inch of rainfall. As water runs off the roof, driveway, patio and even compacted lawn, it picks up contaminants such as fertilizer, pesticides, bacteria from pet waste, grass clippings and other yard debris. One of the ways you can help to keep these pollutants out of our rivers and streams is by planting a rain garden.

Stormwater runoff has another significant impact in parts of the City of Fort Wayne. The amount of stormwater that goes into some of our sewers can cause sanitary sewage to be discharged into the St. Joseph, St. Mary's and Maumee Rivers. The oldest third of Fort Wayne has a combined sewer system. When it is not raining, these sewer pipes carry sanitary sewage to the Water Pollution Control Plant for treatment. But when it rains these same pipes must carry stormwater runoff, too. The combined sewer system can become



overloaded when it rains resulting in sewer overflows to the rivers. Rain gardens can help reduce the amount of stormwater going into these combined sewers so that less sewage is likely to be discharged to the rivers when it rains.

1.3 WHAT IS A RAIN GARDEN?

A rain garden is an attractive, landscaped area that is built at a level slightly below the level of your yard. This depression is designed to capture rain water runoff from impervious (hard surface) areas such as rooftops, roads, sidewalks, driveways and even compacted lawns. Rain gardens are planted with perennial native plants that are selected to tolerate the cycles of rainfall and dry weather that we have here in Northeastern Indiana. The roots of the plants help the soil soak up more water when it does rain, so the amount of stormwater runoff is reduced and what does leave your lot flows more slowly. This helps to prevent soil from eroding.



White Coneflower and Purple Coneflower

The plants in the rain garden also help to clean the water by filtering out some chemical pollutants from stormwater before it goes into local streams and rivers. Rain gardens may sometimes be used to address yard drainage problems and may help recharge supplies of ground water.

In addition to helping control rain water runoff and the pollutants it can carry, rain gardens are also an attractive addition to a landscaping plan for a yard or community. Rain gardens may provide habitat and food for birds and butterflies. Plants may be selected so that the rain garden has a variety of colors, textures and heights. Plants can be chosen to bloom throughout the spring, summer and fall.

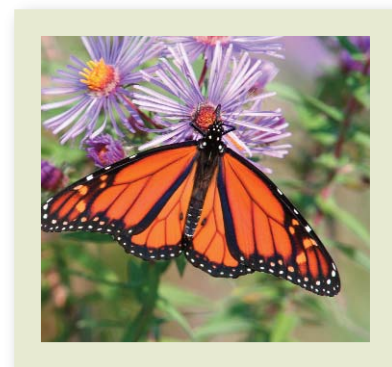


Figure 1 shows a typical side view profile of a rain garden. Designing and installing a rain garden is not difficult. However, there are some basic design principles that can help ensure a successful and attractive rain garden. Within this booklet you will find sample rain garden plans, lists of suggested plants and guidelines for maintenance. Consider this manual to be your step-by-step guide through the process of building an attractive and functional rain garden on your property.

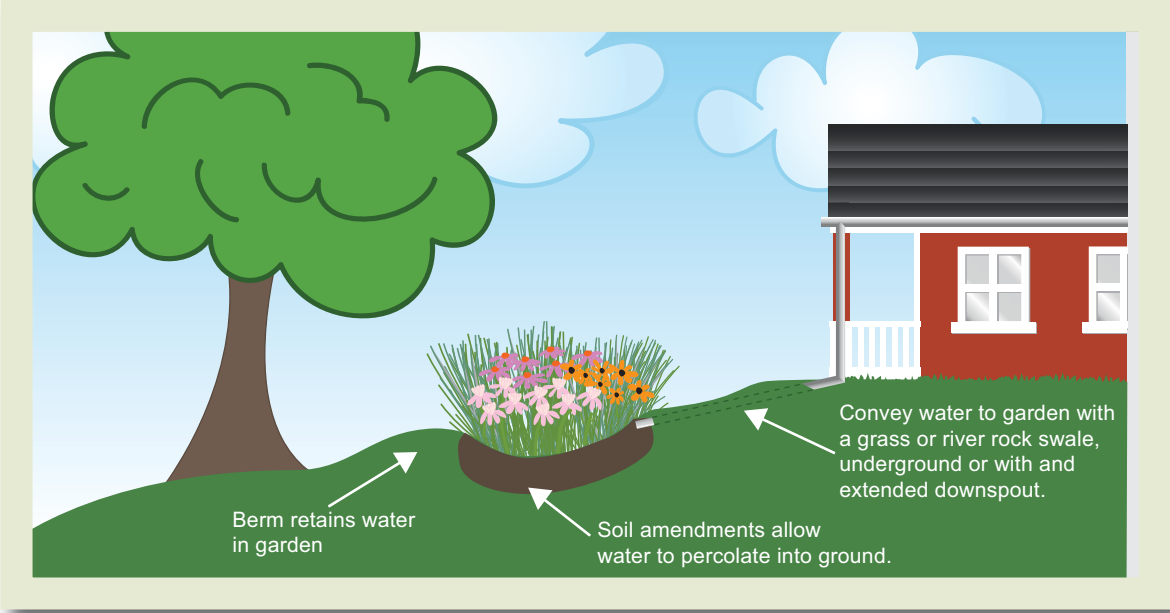


Figure 1. Profile of a Typical Rain Garden